Amendments to the Claims

Claim 1 (currently amended): A method for generating an aerosol, the method which comprises:

providing a gas supplied with input particles;

providing an enclosure having a cross-section widening in a direction of flow to achieve a supersonic velocity;

guiding ~~a~~ the gas ~~having~~ with the input particles ~~suspended therein~~ and ~~flowing~~ causing the gas to flow at ~~a~~ the supersonic velocity ~~such that~~ to cause a compression shock ~~occurs~~ to occur in the gas; ~~and~~

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guiding the gas to cause the compression shock to occur, as seen in the direction of flow, behind an end of the enclosure and outside the enclosure; and

breaking the input particles into output particles being smaller than the input particles by passing the input particles through the compression shock, generating the aerosol.

Claim 2 (cancelled).

Claim 3 (original): The method according to claim 2, which comprises providing the enclosure such that, as seen in the direction of flow, the cross-section of the enclosure narrows prior to widening in order to achieve a sonic velocity.

Claims 4-6 (cancelled).

Claim 7 (original): The method according to claim 1, which comprises feeding the input particles to the gas while the gas is at rest.

Claim 8 (original): The method according to claim 1, which comprises feeding the input particles to the gas while the gas flows at subsonic velocity.

Claim 9 (original): The method according to claim 1, which comprises:

providing the enclosure with a narrowing cross-section upstream of a widening cross-section as seen in a direction of flow; and

providing the gas such that a pressure of the gas in a resting state upstream of the narrowing cross-section is between $1 \cdot 10^5$ Pa and $2.5 \cdot 10^7$ Pa.

Claim 10 (original): The method according to claim 1, which comprises:

providing the enclosure with a narrowing cross-section upstream of a widening cross-section as seen in a direction of flow; and

providing the gas such that a pressure of the gas in a resting state upstream of the narrowing cross-section is between between $2 \cdot 10^5$ Pa and $2 \cdot 10^6$ Pa.

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Claim 11 (original): The method according to claim 1, which comprises:

providing the enclosure with a narrowing cross-section upstream of a widening cross-section as seen in a direction of flow; and

providing the gas such that a pressure of the gas in a resting state upstream of the narrowing cross-section is between $3 \cdot 10^5$ Pa and $1 \cdot 10^6$ Pa.

Claim 12 (original): The method according to claim 1, which comprises:

providing the enclosure with a narrowing cross-section upstream of a widening cross-section as seen in a direction of flow; and

providing the gas such that a pressure of the gas in a resting state upstream of the narrowing cross-section is substantially $5 \cdot 10^5$ Pa.

Claim 13 (original): The method according to claim 1, which comprises:

providing the enclosure with a narrowing cross-section upstream of a widening cross-section as seen in a direction of flow; and

providing the gas such that a temperature of the gas in a resting state upstream of the narrowing cross-section is between -20°C and 400°C.

Claim 14 (original): The method according to claim 1, which comprises:

providing the enclosure with a narrowing cross-section upstream of a widening cross-section as seen in a direction of flow; and

providing the gas such that a temperature of the gas in a resting state upstream of the narrowing cross-section is between 0°C and 50°C.

Claim 15 (original): The method according to claim 1, which comprises:

providing the enclosure with a narrowing cross-section upstream of a widening cross-section as seen in a direction of flow; and

providing the gas such that a temperature of the gas in a resting state upstream of the narrowing cross-section is between 10°C and 30°C.

Claim 16 (original): The method according to claim 1, which comprises:

providing the enclosure with a narrowing cross-section upstream of a widening cross-section as seen in a direction of flow; and

providing the gas such that a temperature of the gas in a resting state upstream of the narrowing cross-section is between 20°C and 25°C.

Claim 17 (original): The method according to claim 1, which comprises providing the gas such that the gas includes at least one element selected from the group consisting of air, N_2, O_2, and CO_2.

Claim 18 (original): The method according to claim 1, which comprises providing the input particles such that an average size of the input particles is between 20 μm and 200 μm.

Claim 19 (original): The method according to claim 1, which comprises providing the input particles such that an average size of the input particles is between 40 μm and 100 μm.

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Claim 20 (original): The method according to claim 1, which comprises providing the input particles such that an average size of the input particles is between 45 μm and 60 μm.

Claim 21 (original): The method according to claim 1, which comprises providing the output particles such that an average size of the output particles is between 1 μm and 10 μm.

Claim 22 (original): The method according to claim 1, which comprises providing the output particles such that an average size of the output particles is between 2 μm and 5 μm.

Claim 23 (original): The method according to claim 1, which comprises providing the output particles such that an average size of the output particles is substantially 3 μm.

Claim 24 (original): The method according to claim 1, which comprises providing the input particles as droplets of a liquid.

Claim 25 (original): The method according to claim 24, which comprises providing water as the liquid.

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Claim 26 (currently amended): The method according to claim 24, which comprises providing the liquid as a carrier liquid ~~for~~ carrying an agent.

Claim 27 (original): The method according to claim 26, which comprises providing the agent as a pharmacologically active agent.

Claim 28 (original): The method according to claim 26, which comprises providing the agent as a pharmacologically active inhalation therapy agent.

Claim 29 (original): The method according to claim 26, which comprises providing a solvent as the liquid.

Claim 30 (original): The method according to claim 29, which comprises providing an alcohol as the solvent.

Claim 31 (original): The method according to claim 24, which comprises providing a combustible liquid as the liquid.

Claim 32 (original): The method according to claim 31, which comprises providing a fuel as the combustible liquid.

Claim 33 (original): The method according to claim 1, which comprises providing at least some of the input particles as loosely linked particles selected from the group consisting of solid particles and semi-solid particles.

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Claim 34 (currently amended): A device for generating an aerosol, comprising:

a gas guiding device configured to guide a gas having input particles suspended therein and flowing at a supersonic velocity, said gas guiding device having an enclosure with a cross-section widening in a direction of flow for achieving the supersonic velocity; and

said gas guiding device being configured to generate a compression shock in the gas ~~such that~~ causing the input particles, upon crossing the compression shock, ~~are~~ to be

broken down into output particles smaller than the input particles, the compression shock occurring, as seen in the direction of flow, behind an end of said enclosure and outside of the enclosure.

Claim 35 (currently amended): The device according to claim 34, wherein ~~said gas guiding device includes an enclosure defining a flow direction,~~ said enclosure guides the gas along the flow direction, said enclosure has a first portion with a narrowest cross-section and a second portion disposed after said first portion as seen in the flow direction, said second portion has a cross-section expanding along the flow direction.

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Claim 36 (original): The device according to claim 35, wherein said enclosure includes a third portion disposed upstream of said first portion as seen in the flow direction, said third portion has a cross-section narrowing along the flow direction.

Claim 37 (original): The device according to claim 34, wherein said gas guiding device is a Laval nozzle.

Claim 38 (original): The device according to claim 37, wherein said Laval nozzle is an unmatched Laval nozzle.

Claim 39 (original): The device according to claim 34, including a supply device connected to said gas guiding device, said supply device supplying the input particles.

Claim 40 (original): The device according to claim 39, wherein said supply device is an atomizer.

Claim 41 (original): The device according to claim 35, including a supply device for supplying the input particles, said supply device being disposed upstream of said narrowest cross-section of said first portion of said enclosure.

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Claim 42 (original): The device according to claim 36, including a supply device for supplying the input particles, said supply device being disposed upstream of said cross-section of said third portion narrowing along the flow direction.

Claim 43 (original): The device according to claim 34, including a gas supply device connected to said gas guiding device for providing pressurized gas.

Claim 44 (original): The device according to claim 43, wherein said gas supply device is a storage tank.

Claim 45 (original): The device according to claim 43, wherein said gas supply device is a pump.

Claim 46 (original): The device according to claim 36, wherein said enclosure is configured such that the gas has a pressure between $1 \cdot 10^5$ Pa and $2.5 \cdot 10^7$ Pa in a resting state upstream of said cross-section of said third portion of said gas guiding device narrowing along the flow direction.

Claim 47 (original): The device according to claim 36, wherein said enclosure is configured such that the gas has a pressure between $2 \cdot 10^5$ Pa and $2 \cdot 10^6$ Pa in a resting state upstream of said cross-section of said third portion of said gas guiding device narrowing along the flow direction.

Claim 48 (original): The device according to claim 36, wherein said enclosure is configured such that the gas has a pressure between $3 \cdot 10^5$ Pa and $1 \cdot 10^6$ Pa in a resting state upstream of said cross-section of said third portion of said gas guiding device narrowing along the flow direction.

Claim 49 (original): The device according to claim 36, wherein said enclosure is configured such that the gas has a pressure of substantially $5 \cdot 10^5$ Pa in a resting state upstream of said cross-section of said third portion of said gas guiding device narrowing along the flow direction.

Claim 50 (original): The device according to claim 36, wherein said enclosure is configured such that the gas has a temperature between -20°C and 400°C in a resting state upstream of said cross-section of said third portion of said gas guiding device narrowing along the flow direction.

Claim 51 (original): The device according to claim 36, wherein said enclosure is configured such that the gas has a temperature between 0°C and 50°C in a resting state upstream of said cross-section of said third portion of said gas guiding device narrowing along the flow direction.

Claim 52 (original): The device according to claim 36, wherein said enclosure is configured such that the gas has a temperature between 10°C and 30°C in a resting state upstream of said cross-section of said third portion of said gas guiding device narrowing along the flow direction.

Claim 53 (original): The device according to claim 36, wherein said enclosure is configured such that the gas has a temperature between 20°C and 25°C in a resting state upstream of said cross-section of said third portion of said gas guiding device narrowing along the flow direction.

Claim 54 (original): The device according to claim 43, wherein said gas supply device provides at least one gas selected from the group consisting of air, N_2, O_2, and CO_2.

Claim 55 (original): The device according to claim 41, wherein said supply device is configured to supply input particles having an average size between 20 μm and 200 μm.

Claim 56 (original): The device according to claim 41, wherein said supply device is configured to supply input particles having an average size between 40 μm and 100 μm.

Claim 57 (original): The device according to claim 41, wherein said supply device is configured to supply input particles having an average size between 45 μm and 60 μm.

Claim 58 (original): The device according to claim 34, wherein said gas guiding device is configured to provide output particles having an average size between 1 μm and 10 μm.

Claim 59 (original): The device according to claim 34, wherein said gas guiding device is configured to provide output particles having an average size between 2 μm and 5 μm.

Claim 60 (original): The device according to claim 34, wherein said gas guiding device is configured to provide output particles having an average size of substantially 3 μm.

Claim 61 (original): The device according to claim 41, wherein said supply device is configured to supply liquid droplets as the input particles.